Schedule of Accreditation

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United Kingdom Accreditation Service

2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

8116

Accredited to ISO 15189:2022

University College London Hospitals NHS Foundation Trust

Issue No: 009 **Issue date:** 01 July 2026

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Testing performed at the above address only

DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE AND FLUIDS Fixed, fresh and frozen tissue; excisional and incisional biopsies and surgical resection specimens Formalin fixed tissues samples (as above) <u>Calcified tissue and bone</u> Processed tissue samples (as above) and from referral cases	<u>Examination of tissues to identify or exclude morphological and cytological abnormalities for the purposes of diagnosis</u>	Macroscopic and Microscopic examination In house documented procedures in conjunction with equipment as specified below: <u>Specimen dissection</u> Manual methods using SOP CU01 <u>Tissue Processing</u> SOP EQ06C in conjunction with manufacturer's instructions using Sekura Tissue Tek VIP processor <u>Decalcification</u> DE06 in conjunction with manufacturer's instructions using Sakura TDE30 decalcifier system. <u>Menarini BoneSTATION Decalcifier - Decalcification EDTA based - NPATH-MainLab BoneSTATION Decalcification System</u> <u>Tissue embedding</u> SOPs SU06 & SU09 in conjunction with manufacturer's instructions using embedding centres

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE AND FLUIDS (cont'd)	Examination of tissues to identify or exclude morphological and cytological abnormalities for the purposes of diagnosis (cont'd)	Macroscopic and Microscopic examination In house documented procedures in conjunction with equipment as specified below:
Paraffin waxed tissue samples (as above)		Tissue sectioning (microtomy) SOP SU08 using Leica microtomes
Frozen Sections		SU03 in conjunction with manufacturer's instructions using Leica cryostat CM1950
FFPE slides prepared in house	Morphological assessment and interpretation / diagnosis	By microscopy with reference to: RE01: Reporting Generic SOP RE02: The reporting of post mortems RE03: The reporting of CSF samples RE04: The reporting of Biopsies RE05: The reporting of Peripheral Nerves RE06: The reporting of Muscle biopsies RE07: The reporting of intraoperative samples RE08: The reporting of Surgical Biopsies, temporal lobes RE09: Reporting of skin biopsy samples RE10: The Reporting of Surgical Biopsies: Definitive Specimens RE11: The reporting of molecular pathology results
Slides from tissue section, CSF, ocular fluid & body fluids	Routine staining Identification of basophilic and eosinophilic structures	Documented in-house procedures in conjunction with manufacturer's instructions with reference to: SOPs SM01 and ST20 using Leica HistoCore Spectra ST Multistainer, Leica HistoCore Spectra CV Coverslipper and Haematoxylin and Eosin stains

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE AND FLUIDS (cont'd)	Examination of tissues to identify or exclude morphological and cytological abnormalities for the purposes of diagnosis (cont'd)	In house documented procedures in conjunction with equipment as specified below:
Slides from tissue section, CSF, ocular fluid & body fluids (cont'd)	Special staining	Documented in-house procedures for manual hand staining with the following stains with reference to:
	Acid mucins	Alcian Blue (pH 2.5) (SOP ST02)
	Acid and neutral mucins	Alcian Blue/ Periodic Acid Schiff (SOP ST04)
	Amyloid	Congo Red (SOPST10)
	Nissl substance	Cresyl Fast Violet (SOP ST11)
	Blood cells	Giemsa (SOP ST15A)
	Protozoa	Giemsa (SOP ST15B)
	Reticulin fibres	Gordon and Sweets (SOP ST16)
	Gram positive and negative bacteria	Gram Stain (SOP ST17)
	Fungal elements	Grocott (SOP ST19)
	Connective tissue	Haematoxylin Van Gieson (SOP ST22)
	Laforra bodies	Lugols Iodine (SOP ST25)
	Myelin and Nissl substance	Luxol Fast Blue (SOP ST26)
	Elastic fibres and connective tissue	Miller's Elastic Van Gieson (SOP ST30)
	Fibrin	Martius Scarlet Blue (SOP ST31)
	Glycogen	Periodic Acid Schiff – diastase (SOP ST33)
	Neutral mucins, glycogen, fungi	Periodic Acid Schiff (SOPST34)

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE AND FLUIDS (cont'd)	Examination of tissues to identify or exclude morphological and cytological abnormalities for the purposes of diagnosis (cont'd)	In house documented procedures in conjunction with equipment as specified below:
Slides from tissue section, CSF, ocular fluid & body fluids (cont'd)	Special staining (cont'd)	Documented in-house procedures for manual hand staining with the following stains with reference to:
	Pituitary cells	Periodic Acid Schiff/Orange G (PAS/OG) (SOP ST36)
	Ferric iron salts	Perl's Prussian Blue (SOP ST37)
	Lipofuscin	Sudan Black (SOP ST42)
	Various staining of rapid smears	Toluidine Blue (SOP ST43)
	Calcium	Von Kossa (SOP ST45)
	Lipofuscin	Ziehl Nielsen (Long) (SOP ST48)
	Acid Fast Bacilli	Ziehl Nielsen (SOP ST49)
		SOP SM02 for automated staining using Ventana Benchmark with the following stains:
	Acid mucins	Alcian Blue
	Acid and neutral mucins	Alcian Blue PAS
	Amyloid	Congo Red (not nerve)
	Elastic fibres and connective tissue	EVG
	Fungal elements	Grocott
	Neutral mucins, glycogen, fungi	PAS
	Glycogen removal	PASD
	Ferric iron salts	Perls
	Reticulin fibres	Retic

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE AND FLUIDS (cont'd)	Examination of tissues to identify or exclude morphological and cytological abnormalities for the purposes of diagnosis (cont'd)	In house documented procedures in conjunction with equipment as specified below:
Slides from tissue section, CSF, ocular fluid & body fluids	Immunohistochemistry:	SOP IM22 in conjunction with manufacturer's instructions using Ventana Benchmark Discovery Ultra with the following antibodies:
	Detection of:	
	Amyloid protein	A4, beta amyloid-N
	Pituitary hormone adrenocorticotropin	ACTH
	Alpha smooth muscle actin	SMA
	Amyloid precursor protein	APP
	Classification of dementias	AT8 (TAU)
	Astrocytoma identification	ATRX
	BRAF Gene	Brachyury
	Complement	BRAF v600E
	Low molecular weight cytokeratin	CAM 5.2
	CD10 antigen	CD10
	Cd117 antigen	CD117
	Plasma cells	CD138 (paraffin) CD138 (cyto)
	Mast cells	CD1a
	B-cell antigen	CD20 (paraffin) CD20 (cyto) CD20 (nerve)
	Tumour necrosis factor	CD30
	Endothelial cell expression	CD31
	Endothelial cell expression	CD34

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE AND FLUIDS (cont'd)	Examination of tissues to identify or exclude morphological and cytological abnormalities for the purposes of diagnosis. (cont'd)	In house documented procedures in conjunction with equipment as specified below:
Slides from tissue section, CSF, ocular fluid & body fluids (cont'd)	Immunohistochemistry: (cont'd)	SOP IM22 in conjunction with manufacturer's instructions using Ventana Benchmark Ultra with the following antibodies:
	Detection of: (cont'd)	
	Alpha 1 fetoprotein, germ cell tumour marker	AFP
	Pan T-cell marker	CD3
	Helper T cells	CD4 (paraffin) CD4 (cyto)
	Neuronal cell adhesion molecules	CD56
	Nerves and muscle fibres (peritendinous & regeneration)	CD56 (Muscle)
	Macrophages	CD68 (paraffin) CD68 (cyto)
	B-cell subset	CD79a (paraffin) CD79a (cyto)
	Cytotoxic T cells	CD8 (paraffin) CD8 (nerve) CD8 (cyto)
	CDX2 antigen	CDX2 (paraffin) CDX2 (cyto)
	Chromogranin granules in cells	Chromogranin
	Cytokeratin 20 expression	CK 20 (paraffin) CK20 (cyto)
	Cytokeratin 5 expression	CK 5
	Cytokeratin 7 expression	CK 7 (paraffin) CK7 (cyto)
	Cytomegalovirus	CMV

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE AND FLUIDS (cont'd)	Examination of tissues to identify or exclude morphological and cytological abnormalities for the purposes of diagnosis (cont'd)	In house documented procedures in conjunction with equipment as specified below:
Slides from tissue section, CSF, ocular fluid & body fluids (cont'd)	Immunohistochemistry: (cont'd)	SOP IM22 in conjunction with manufacturer's instructions using Ventana Benchmark Ultra with the following antibodies:
	Detection of: (cont'd)	
	Myofibrillar antigen	Desmin (paraffin)
	Epithelial Membrane Antigen	EMA
	Epigenetic regulator	EZH2
	Follicle Stimulating Hormone	FSH
	Transcription Factor	GATA3 (paraffin) GATA3 (cyto)
	Growth hormone	GH
	Glial Fibrillary Acidic Protein	GFAP
	Herpes Simplex Virus I antigen	HSV I
	Herpes Simplex Virus II antigen	HSV II
	Mutation specific marker for the G34R mutation in the histone variant H3.3	H3.3G34R
	Mutation specific marker for the histone H3K27M protein	H3K27M
	H3K27 trimethylation expression marker (retained or loss)	H3K27 me3
	Human Chorionic Gonadotropin (HCG), germ cell tumour marker	HCG
	Melanoma marker	HMB-45
	Gliomas	IDH1
	Transmembrane glycoprotein	IC2

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE AND FLUIDS (cont'd)	Inhibin antigen Examination of tissues to identify or exclude morphological and cytological abnormalities for the purposes of diagnosis (cont'd)	Inhibin-α In house documented procedures in conjunction with equipment as specified below:
Slides from tissue section, CSF, ocular fluid & body fluids (cont'd)	Immunohistochemistry: (cont'd) Detection of: (cont'd)	SOP IM22 in conjunction with manufacturer's instructions using Ventana Benchmark Ultra with the following antibodies:
	INI-1/SMARCB1 protein expression marker	INI-1
	Cell proliferation	Ki67 (paraffin) Ki67 (cyto)
	Leucocyte common antigen	LCA / CD45 (paraffin) LCA/ CD45 (cyto)
	Luteinising hormone antigen	LH
	Microtubule associated protein marker antigen	MAP2
	Melanoma	Melan-A
	Broad spectrum cytokeratin expression	MNF116 (paraffin) MNF 116 (cyto)
	Neuronal cell marker	Nestin
	Neuronal nuclear protein	NeuN
	Nerve fibres	Neurofilament cocktail
	Oct 3/4 germ cell marker	Oct 3/4
	Dementia classification	P62
	Placental alkaline phosphate antigen	Placental Alkaline Phosphatase (paraffin) Placental Alkaline Phosphatase (cyto)
	Transcription factor	PIT-1
	Prolactin antigen	Prolactin

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE AND FLUIDS (cont'd)	Examination of tissues to identify or exclude morphological and cytological abnormalities for the purposes of diagnosis (cont'd)	In house documented procedures in conjunction with equipment as specified below:
Slides from tissue section, CSF, ocular fluid & body fluids (cont'd)	Immunohistochemistry: (cont'd)	SOP IM22 in conjunction with manufacturer's instructions using Ventana Benchmark Ultra with the following antibodies:
	Detection of: (cont'd)	
	Prostate specific antigen	PSA
	S-100 protein antigen	S-100 Protein
	Transcription factor	SF1
	Stat6 protein	STAT6
	Phosphorylated neurofilaments	SMI 31- phosphorylated
	Non-phosphorylated neurofilaments	SMI-32 – non-phosphorylated
	Myelin basic protein	SMI94 (MBP94) (paraffin) SMI94 (MBP94) (nerve)
	SV40 antigen	SV40 (paraffin) SV40 (cyto) Calbindin
	Synaptophysin antigen	Synaptophysin (paraffin) Synaptophysin (cyto)
	Phospho-S6 Ribosomal Protein (Ser235/236)	pS6 235-236
	Phospho-S6 Ribosomal Protein (Ser240/244)	pS6 240-244
	Thyroglobulin antigen	Thyroglobulin
	phosphorylated TDP-43 marker	TDP Phos
	Nuclear protein TDP43 marker	TDP43
	Transcription factor	TPIT
	Thyroid Stimulating Hormone	TSH

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE AND FLUIDS (cont'd)	Examination of tissues to identify or exclude morphological and cytological abnormalities for the purposes of diagnosis (cont'd)	In house documented procedures in conjunction with equipment as specified below:
Slides from tissue section, CSF, ocular fluid & body fluids (cont'd)	Immunohistochemistry: (cont'd)	SOP IM22 in conjunction with manufacturer's instructions using Ventana Benchmark Ultra with the following antibodies:
	Detection of: (cont'd)	
	Toxoplasma	Toxoplasma
	TTF1 antigen	TTF1 (paraffin) TTF1 (cyto)
	Thyroid Stimulating Hormone	TSH
	Dementia classification	Ubiquitin
	Vimentin antigen	Vimentin
		SOP IM22a in conjunction with manufacturer's instructions using Ventana Discovery Ultra with the following antibodies:
	Dementia classification	Alpha-synuclein
	Sarcolemmal membrane, dystrophy marker	Alpha-dystroglycan
	Sarcolemmal membrane, dystrophy marker	Alpha-sarcoglycan
	Sarcolemmal membrane	Beta-Dystroglycan
	Sarcolemmal membrane, dystrophy marker	Beta-Sarcoglycan
	Sarcolemmal membrane	Beta Spectrin
	Myofibrillary marker	BAG3
	Myofibrillary marker	Calpain
	Inflammatory marker, mature T-cell	CD3 (muscle)

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE AND FLUIDS (cont'd)	Examination of tissues to identify or exclude morphological and cytological abnormalities for the purposes of diagnosis (cont'd)	In house documented procedures in conjunction with equipment as specified below:
Slides from tissue section, CSF, ocular fluid & body fluids (cont'd)	Immunohistochemistry: (cont'd)	SOP IM22a in conjunction with manufacturer's instructions using Ventana Discovery Ultra with the following antibodies:
	Detection of: (cont'd)	
	Inflammatory marker, cytotoxic T-cell	CD8 (muscle)
	Inflammatory marker, B-cell	CD20 (muscle)
	Inflammatory marker, platelet endothelial cell adhesion molecule	CD31 (muscle)
	Inflammatory marker, macrophages	CD68 (muscle)
	Sarcolemmal membrane, dystrophy marker	Caveolin 3
	Inflammatory marker, cell lysis	C5B9 (MAC) (muscle)
	Sarcolemmal membrane	Spectrin (paraffin) Spectrin (muscle)
	Sarcolemmal membrane, dystrophy marker	Delta-sarcoglycan
	Myofibrillar marker	Desmin
	Sarcolemmal membrane, dystrophy marker	Dysferlin (Hamlet 1)
	Sarcolemmal membrane, dystrophy marker	Dystrophin 1
	Sarcolemmal membrane, dystrophy marker	Dystrophin 2
	Sarcolemmal membrane, dystrophy marker	Dystrophin 3
	Nuclear envelope marker	Emerin

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE AND FLUIDS (cont'd)	Examination of tissues to identify or exclude morphological and cytological abnormalities for the purposes of diagnosis (cont'd)	In house documented procedures in conjunction with equipment as specified below:
Slides from tissue section, CSF, ocular fluid & body fluids (cont'd)	Immunohistochemistry: (cont'd)	SOP IM22a in conjunction with manufacturer's instructions using Ventana Discovery Ultra with the following antibodies:
	Detection of: (cont'd)	
	Myofibrillar marker	Filamin C
	Human leucocyte antigen	HLA I-ABC
	Human leucocyte antigen	HLA II-DP,DQ,DR
	Sarcolemmal membrane, dystrophy marker	Gamma-Sarcoglycan
	Sarcolemmal membrane, dystrophy marker	Laminin Alpha 2 4H8 Laminin Alpha 2 5H2
	Vascular and muscle regeneration	Laminin Alpha 5
	Sarcolemma and vascular	Laminin Beta 1
	Sarcolemma and vascular	Laminin Gamma 1
	Inflammatory marker, lysosomes	Lamp-2
	Autophagy marker	LC3b
	Muscle fibre sub-typing, Type II	Myosin heavy chain-fast
	Muscle fibre sub-typing, immature	Myosin heavy chain (neonatal)
	Muscle fibre sub-typing, Type I	Myosin heavy chain-slow
	Muscle fibre sub-typing, immature	Myosin heavy chain developmental
	Muscle fibre sub-typing, Type 2X	Myosin heavy chain 6H1
	Muscle fibre sub-typing, Type 2A	Myosin heavy chain 7.5.2B
	Muscle fibre sub-typing, pan except 2X	Myosin heavy chain BF-35

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE AND FLUIDS (cont'd)	Examination of tissues to identify or exclude morphological and cytological abnormalities for the purposes of diagnosis: (cont'd)	In house documented procedures in conjunction with equipment as specified below:
Slides from tissue section, CSF, ocular fluid & body fluids (cont'd)	Immunohistochemistry: (cont'd)	SOP IM22a in conjunction with manufacturer's instructions using Ventana Discovery Ultra with the following antibodies:
	Mitochondrial marker, Complex IV enzyme	MTCO1
	Inflammatory marker	MxA (Myxovirus resistance protein A)
	Myofibrillar antigen	Myotilin
	Mitochondrial marker, complex I enzyme	NDUFB8 Complex I
	Sarcolemmal membrane, dystrophy marker	nNOS
	Myofibrillar / autophagy marker	p62 (muscle)
	Sarcoplasmic of type 2 muscle fibres	Serca-1
	Sarcoplasmic of type 1 muscle fibres	Serca-2
	Inflammatory Myopathies	Utrophin
	Mitochondrial marker, outer membrane	TOMM20

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE AND FLUIDS (cont'd)	Examination of tissues to identify or exclude morphological and cytological abnormalities for the purposes of diagnosis: (cont'd)	In house documented procedures in conjunction with equipment as specified below:
Sections from tissue CSF, ocular fluid & body fluids	Immunohistochemistry: (cont'd) Detection of:	SOP The use and maintenance of the Discovery XT Autostainers
	Prion Proteins	KG69 CSM35 12F10
	Alpha-Synuclein Beta-Amyloid Glial Fibrillary Acidic Protein Dementia Classification Dementia Classification Dementia Classification	a-Synuclein b-Amyloid GFAP AT8 Tau P62 TDP43
	Non-Gynaelogical Cytology	Preparation of slides for staining
Cerebrospinal fluid Ocular fluid and body fluids	Examination of tissues to identify or exclude morphological and cytological abnormalities for the purposes of diagnosis	Documented in-house procedures CY03A, CY04 and CY05 in conjunction with manufacturer's instructions using Shandon Cytospin 4
	Staining of slides for analysis	Documented in-house procedures using Leica ST5020 Multistainer and ST503 coverslipper with reference to:
Fixed preparations	Basic cellular components	Giemsa (SOP CY07) PAP (SOP CY06)

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE AND FLUIDS (cont'd)	Molecular Biology	
Sections from tissue, CSF, ocular fluid & body fluids	DNA Profiling for detection of abnormal sequences for disease conditions	Documented in-house methods for DNA manufacture, purification and detection using techniques and kits in combination with manufacturer's instructions: DNA Extraction SOP PC05 in conjunction with manufacturer's instructions using Eppendorf centrifuge and Thermomixer. Using the Maxwell CSC 48 Automated DNA/RNA extractor for DNA extraction. NanoDrop Spectrophotometer from Labtech International RE12: The reporting of molecular pathology results by molecular scientists RNA Extraction SOP PC05 in conjunction with manufacturer's instructions using Eppendorf centrifuge and Thermomixer. Using the Maxwell CSC 48 Automated DNA/RNA extractor for RNA extraction. NanoDrop Spectrophotometer from Labtech International RE12: The reporting of molecular pathology results by molecular scientists

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE AND FLUIDS (cont'd)	Molecular Biology (cont'd)	
Sections from tissue CSF, ocular fluid & body fluids (cont'd)	DNA Profiling for detection of abnormal sequences for disease conditions (cont'd)	Documented in-house methods for DNA manufacture, purification and detection using techniques and kits in combination with manufacturer's instructions:
	Identification of IDH1, IDH 2, BRAF, V600E, H3F3, TERT promoter point mutations	SOP PC04 in conjunction with manufacturer's instructions using Applied Biosystems Thermocycler Veriti and SimpliAmp by PCR and Sanger sequencing (provided by Eurofins)
	Detection of semi-quantitative methylation rate on CpG island of MGMT	SOP PC06 in conjunction with manufacturer's instructions using Eppendorf Thermomixer and QuantStudio 5 Real – time PCR system by high resolution melting methylation assay
	Identification of copy number variation on chromosome 1p, 19q,	SOP PC02 in conjunction with manufacturer's instructions for using QS5 Real – time PCR system using copy number assay
	Identification of TERT mutations	SOP PC04 – TERT promoter mutations in gliomas detected by sanger sequencing (performed by Eurofins)
	Identification of H3 mutations	SOP PC04 Detection of histone H3 mutations in adult glioblastoma detected by sanger sequencing (performed by Eurofins)
	Identification of EGFR viii mutation	SOP PC011 in conjunction with manufacturer's instructions using Applied Biosystems Thermocycler verity and QS5 Real – time PCR system

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE AND FLUIDS (cont'd)	Molecular Biology (cont'd)	
Sections from tissue CSF, ocular fluid & body fluids (cont'd)	DNA Profiling for detection of abnormal sequences for disease conditions (cont'd)	Documented in-house methods for DNA manufacture, purification and detection using techniques and kits in combination with manufacturer's instructions:
	Identification of BRAF fusion mutations	SOP PC09 in conjunction with manufacturer's instructions using Applied Biosystems Thermocycler verity and QS5 Real – time PCR system
	Identification of BRAF V600E point mutation	SOP PC04 in conjunction with manufacturer's instructions for using Applied Biosystems Thermocycler verity by PCR and Sanger sequencing
	Analysis of loss of homozygosity on CDKN2A and CDKN2B in gliomas	SOP PC20 Analysis of loss of homozygosity on CDKN2A and CDKN2B in gliomas using QS5 for quantitative real time PCR
	Illumina 850k methylation arrays	SOP PC15 and PC16: DNA preparation for Illumina arrays prior to examinations by referral laboratory. Methylation Array Pipeline and the use of a downloaded controlled, local copy of the Heidelberg Classifiers ('brain_classifier_v12.8' and 'sarcoma_classifier_v12.8') managed and supported by the Neuropathology bioinformatics team.

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE AND FLUIDS (cont'd)	Molecular Biology (cont'd)	
Slide preparations of frozen tissue sections of adult / paediatric muscle as stated	Staining of slides for analysis	Documented in-house procedures by manual staining with reference to:
Adult	Identification of general morphology including of basophilic and eosinophilic structures	Haematoxylin and Eosin (SOP MU12)
Adult & Paediatric	Identification of general morphology highlighting nemaline rods, cytoplasmic and mitochondrial abnormalities	Modified Gomori Trichrome (SOP MU13)
Adult	PAS +ve substances	Periodic Acid Schiff (SOP MU14)
Paediatric	PAS +ve substances	Diastase Periodic Acid Schiff (SOP MU14a)
Adult	Lipids	Sudan Black (SOP MU15)
Adult & Paediatric	Simple lipids	Oil Red O (SOP MU18)

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE AND FLUIDS (cont'd)	Histochemistry	
	Examination of tissues to identify or exclude morphological and cytological abnormalities for the purposes of diagnosis	
Adult & Paediatric	Nicotinamide Adenine Dinucleotide	SOP MU04
Adult	Succinic Dehydrogenase	SOP MU05
Adult & Paediatric	Cytochrome Oxidase	SOP MU06
Adult & Paediatric	Acid phosphatase	SOP MU08
Adult & Paediatric	Adenylate deaminase	SOP MU09
Adult	Adenosine triphosphate	SOP MU10
Adult & Paediatric	Combined cytochrome oxidase and succinic dehydrogenase	SOP MU19
Adult and paediatric	Phosphorylase	SOP MU07
Paediatric	Phosphofructokinase	SOP DL03
Paediatric	Menadione-linked-alpha-glycerophosphate dehydrogenase without substrate	SOP DL04
	Alkaline Phosphatase	SOP DL30

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE AND FLUIDS (cont'd)	Histochemistry (cont'd)	
Slide preparations of frozen tissue sections of adult and paediatric muscle	Fluorescent markers	Documented in-house procedures by manual staining with reference to:
	Markers for Collagenopathy (muscular dystrophy/myopathy)	Collagen VI / Perlecan. SOP DL11
	Marker for Dystroglycanopathy (muscular dystrophy)	A-Dystroglycan. SOP DL09
	Reference protein for the a-dystroglycan	B-dystroglycan. SOP DL09
	Marker of actin filaments	Phalloidin – SOP DL10
	Electron Microscopy	
Peripheral nerve biopsies	Examination of tissues to identify or exclude morphological and cytological abnormalities for the purposes of diagnosis	
		Processing & Embedding
		Documented in-house procedure SOP PE04 paraffin wax embedding
		Documented in-house procedure SOP PE05 for resin embedding
		Documented in-house procedure SOP PE06 for Teasing of nerve fibres for microscopic examination
		Semi-thin Sectioning SOP EM05 in conjunction with manufacturer's instructions using Ultramicrotome (Ultra cut E) Reichert-Jung
		Ultra-thin Sectioning using SOP EM05

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
HUMAN BODY TISSUE AND FLUIDS (cont'd)	Histochemistry (cont'd)	
Human tissues – muscle, skin, tumour and post mortem tissue	Electron Microscopy (cont'd)	Staining of material using the following stains with reference to:
Semi-thin resin sections mounted on glass slides	To differentiate between myelin, collagen and elastin. Demonstration of tubercle bacilli.	Methylene Blue/ Azure A/ Basic fuchsin (SOP EM07)
Semi-thin resin sections mounted on glass slides	Tissue components and metachromatic tissue elements	Toluidine Blue (SOP EM08)
Ultra-thin (~70nm) sections on support grids		Uranyl acetate/ Lead acetate (SOP EM09)
END		